Happenings

Sept. 10	Soundscape Mgmt. Workshop, AKSO
Sept. 10-14	NRAC, AKSO
Sept. 29	National Public Lands Day
Nov. 5	I&M Steering Committee Mtg (*Outside in Nov.*)
Dec. 3-7	NPS GIS Spatial Odyssey, Primm, NV
January	*Tentative Biological Inventories Review Wrkshp (Anch)*
March	*CAN Scoping Meeting (Fairbanks)*

Coming Soon to A Park Near You

I&M Data Management Training
Blain Anderson, Inventory & Monitoring Technician at AKSO, and Tom Heinlein, Inventory Coordinator for NWAN, are attending the Natural Resource Data Management Workshop in Denver in September. Afterwards, Blain will be travelling to each park or network to train NR folks on the use of these new tools and approaches. He will be contacting park managers and others to coordinate training times. Keep watching for more information.

High Tech News...
The I&M INTRANET is up and running. It can be viewed by most Parks by simply typing "web" into the address bar of Internet Explorer. Sorry, Netscape won't work as well.

For NPS folks, we are located at:*http://web/rgr/i&m/I&M_index.htm*
Note: there is no "www" in the address.
Please contact Blain with any suggestions/ comments or things to include.

Amphibians and Beyond...
The draft amphibian flashcards have been delivered to the parks. We've been receiving a trickle of frog and toad field-forms all summer. So far, the network with the most sightings is the SEAN with the Coast-Walkers leading the charge. Boreal toads seem to enjoy the beaches there. However, a wood frog was photographed way up at 67° 03' 50" in GAAR by **Adam Liljeblad** and **Maureen Nolan**. Keep up the good work folks!

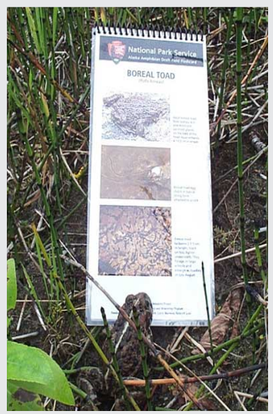
GPS Units to Lend!

The Alaska Region recently purchased three recreational Garmin GPS units for fieldwork, aerial mapping, etc. They've been tested and are ready for short-term loan to I&M-Related projects. Base maps are installed, and they come with a waterproof case.

One of the units also has **DGPS** capabilities and comes with backpack and cool antenna. It is most useful on or near the coast.

Contact:
Blain Anderson

The cover of the draft field flashcard set for Alaska's Amphibians.



Science Matters

*This curious boreal toad was photographed by **Jess Grunblatt** of the AKSO Landcover Mapping Program while doing verification work at Glacier Bay. It appears to be especially interested in the reproduction information...*

DRAFT

Alaska Region
Inventory and Monitoring Program

September, 2001

The Voucher

...a newsletter of the Alaska Region Inventory and Monitoring Program

In this edition:

This is the newsletter of the National Park Service, Alaska Region, Inventory and Monitoring Program.

Questions, comments or items for publication, may be sent to:
Blain Anderson
National Park Service

Alaska Region
Inventory and Monitoring Program
2525 Gambell
Anchorage, AK 99503
(907) 257-2488
e-mail:
Blain_Anderson@nps.gov

Excitement for Eelpouts & Lumpsuckers in Glacier Bay Work

The Marine Fish Inventory in GLBA for Southeast Alaska Network (SEAN) is going well, according to **Mike Litzow** (Co-Principal Investigator, USGS/ABSC), who is heading up the survey with **John Piatt**.

The work is being based off the boat ***Steller*** and is utilizing a number of nets to sample fishes in order to confirm presence/absence of >90% of the species expected to occur in park waters. Less than 30% of the roughly 300 species expected to occur here are considered adequately documented. The goal is to sample as many habitat types as possible this summer and to collect voucher specimens to curate as wet specimens for housing at the University of Alaska Museum up in Fairbanks as well as a yet-to-be-determined facility somewhere here in Southeast.

(cont. on page 3)

ABSC Crew Completes Bird Inventory Fieldwork in NW Alaska Parks

The first Biological Inventory field work for the I&M Program was finished in June. **Bob Gill**, of the USGS Alaska Biological Science Center, and his crew conducted montaine nesting shorebird surveys in Cape Krusenstern NM and Noatak N Pres.

They report lots of birds and spectacular weather with a little snow to post-hole through.

(cont. on page 2)

I&M Overview

The Inventory and Monitoring program was established in 1992. Its intent is to provide consistent databases of information about our natural resources, including species diversity, distribution and abundance; and to determine the current condition of our resources and how they change over time.

Inventories are single- or multi-year finite projects. Vital signs monitoring will involve permanent multi-year programs. Inventory and Monitoring both work under a model of sharing resources and expertise within networks of parks.

Parks in the Alaska Region are organized into 4 Networks, CAN, NWAN, SEAN, and SWAN. See page 2 for a list of contacts.

Sara's Corner
(Notes from the Alaska Region)

We're off to a good start with the Inventory & Monitoring Program in Alaska. Two years ago we began preparations for the Biological Inventories and the Vital Signs Monitoring Program. Much has been accomplished in that time, as you'll see in this newsletter. Existing NPS staff heavily invested their time in the beginning, and continue to do so, to establish the program on firm footing. Additional staff have been hired to head up the programs within most of the four Alaskan networks, bringing additional perspective, expertise, and manpower to our efforts.

The biological inventories are in progress in all networks. The April 2000 Scoping Meeting identified vascular plants and small mammals as the greatest void in our knowledge of species in Alaska Parks. Marine fish in GLBA was another area needing significant attention. Work on freshwater fish & land birds, in some areas, rounds out our Biological Inventory program.

We are developing training programs to educate park staff in the use of the information management tools that have been developed for I&M data. We will be developing a standard set of products for the program including a training series for managers, technical and lay audiences.

With the inventories in full operational swing we turned our attention to Vital Signs Monitoring. The Central Alaska network was the first to receive planning funds. Their efforts have focused on identifying the needs of the network parks & beginning to formulate a monitoring plan.

The existing Denali LTEM Program is working closely with the network & will be an integral part of the network's program to develop a fundamental ecological understanding of the ecosystems under NPS stewardship. This understanding will better enable park managers to care for their parks and make informed management decisions.

(Sara Wesser is the Alaska Region Inventory & Monitoring Coordinator)

Lake Clark Plant Work Covers New Ground

The first biological inventory work for Southwest Alaska Network occurred in LACL. **Rob Lipkin** (Principal Investigator) and **Anna Jansen** of the Alaska Natural Heritage Program, as well as **Penny Knuckles**, **Eve Laeger** and a longtime volunteer from LACL performed a plant inventory and sampled 45 locations throughout the park by helicopter. 255 different species were collected with over 700 total specimens for verification. Several taxa were previously known to occur, but lacked a vouchered specimen at the UA Museum.

20 species and two varities are new to the Park, and several new locations of rare plants were found. The project accessed under-sampled areas of the Park and filled many geographical and ecological gaps including the LACL coast which was visited for 14 days. Costs for this work was reduced by sharing aircraft with coastal bear studies and archeological field crews. AKNHP is compiling the results into a useable database with location, habitat, and associated plant species.

The Southwest Alaska Network met on September 7th to review the revised study plan for Biological Inventories. The meeting allowed review of the budget, staffing needs, and priorities for upcoming years.

Ecologist Ian Martin of KEFJ was introduced to the group and will be helping with data management for the Network. Additionally, KATM will be hiring a Fisheries Biologist , who in addition to regular duties, will act as Principal Investigator for Network fish projects.

NWAN Bird Work (cont. from page 1)

Lee Tibbitts reports that they detected 74 species of birds in NOAT and 54 species in CAKR. In NOAT, they documented presence of 4 of the expected shorebird species (Pacific golden plover, Hudsonian godwit, surfbird, red knot), 2 of the expected waterfowl species (bufflehead, common merganser), 1 of the expected jaegers (pomarine jaeger), and 1 of the expected songbirds (hermit thrush).

In CAKR, they documented the presence of 1 of the expected shorebird species (buff-breasted sandpiper) and 1 of the expected songbird species (hoary redpoll).

The crew included Gill and Tibbetts, **Karen Oakley, Lee Tibbetts, John Pearce, David Ward, Nathan Senner**, and two cooperating Russian scientists, **Maxs Dementiev** and **Pavel Tomkovich**.

Small Mammals Group Starts the Season in Yukon-Charley & Northwest Alaska Parks

This specimen-based small mammal inventory for NPS Units will employ a number of approaches:

A targeted reconnaissance will emphasize edge and patchy habitats, and different elevations to maximize species diversity. In comparison to grid layouts, more than two times as many sites will be sampled resulting in substantially higher trap effort and success.

During the course of fieldwork, selected opportunities necessitate the use of various types of traps in addition to standard trapline transects. These opportunities may include small but highly productive sites in edge and patch habitats such as near ponds and streams, talus slopes, and blow-down areas. Small pockets with concentrated numbers of small mammals are encountered and will be sampled to maximize overall capture success. For a number of small mammal species that need to be targeted (e.g., water shrews) this may be the only way to confirm their presence and secure valuable specimens.

The UAM Mammal Collection has developed a geo-referenced information network that will manage all data on archived specimens and samples, thereby enhancing management and scientific usage of NPS materials and documentation of their significance. A web interface to the collection data has been implemented and extended to incorporate data linking specimen records to projects that have used, or are using, specimens. Hence, the database will be readily accessible to future NPS personnel.

Source: SMALL MAMMAL INVENTORY OF ALASKA'S NATIONAL PARKS AND PRESERVES, J. A. Cook, S. O. MacDonald, and Amy Runck, 2001

Lots of New Faces Around Here!

Susan Kedzie-Webb was hired to coordinate the Biological Inventory Program for the Southwest Area Network (SWAN). Susan comes from Montana via Oregon where she was Grassland Birds Conservation Coordinator for the Oregon Dept. of Fish and Wildlife. She has a MS degree in Plant Ecology and is looking forward to learning about the other taxa and species in Alaska (although she admits that she will probably not be fishing anytime soon). Susan has scheduled upcoming visits to LACL and KEFJ in the near future. She is based at AKSO on the second floor and her number is 257-2634.

Tom Heinlein was hired to coordinate the Biological Inventories for the Northwest Area Network (NWAN). Tom hails from Vermont and most recently worked as a Research Ecologist for the Ecological Restoration Institute at Northern Arizona University. He has a MS and BS in Forestry and a strong background in Fire Ecology and Forest Restoration. Tom says he is looking forward to learning more about all the NWAN ecosystems, and summer field work in CAKR and BELA. He is located in Cultural Resources on the first floor and can be reached at 257-2422.

Maggie MacCluskie is leading the Central Area Network (CAN) as the new Network Coordinator. No stranger to the north country, she got her Ph.D. at UAF studying waterfowl in the Minto Flats area. In her last job as Program Director at the Montana Natural History Center, Maggie was very involved in education and partnerships. She is now based in Fairbanks at 456-0281.

Alan Bennett is coming back to Alaska to be the Network Coordinator for SWAN. More information soon.

Network	Name	Position	Parks	Phone
AKSO Alaska Region	Sara Wesser	Regional I&M Coordinator		(907) 257-2557
AKSO	Blain Anderson	I&M Technician		(907) 257-2488
CAN Central Alaska Network	Maggie MacCluskie	Network Coordinator	DENA/ WRST/YUCH	(907) 456-0281
NWAN Northwest Alaska Network	Tom Heinlein	Inventory Coordinator	BELA/CAKR/GAAR/KOVA/NOAT	(907) 257-2422
SEAN Southeast Alaska Network	Lewis Sharman	Network Lead	GLBA/KLGO/SITK	(907) 697-2623
SWAN Southwest Alaska Network	Susan Kedzie-Webb	Inventory Coordinator	ALAG/ANIA/KEFJ/LACL/KATM	(907) 257-2634
SWAN	Alan Bennett	Network Coordinator	ALAG/ANIA/KEFJ/LACL/KATM	(907) 257-2628

(GLBA Fish cont. from page 1)

The crew consists of three *Steller* personnel and three BRD personnel aboard the vessel. The project got started at the end of June, and should be finished by mid-August. Next summer they'll be back to sample for another 30 days, mostly in the outer waters with perhaps a few days back in the Bay to complete deep-water and shallow-water bottom trawling and a few mid-water trawls

Bottom Trawls

The study plan calls for stratified random sampling of depths and bottom types across park waters. The bottom sampling employs a beam trawl that essentially is dragged across the bottom. Early on a couple nets were lost when they snagged on rocks, so since then they've been focusing on relatively smooth, flat silt bottoms. They hope next year to return with some more "robust" gear and/or methods to better sample the diversity of bottom types.

'The crew is excited by the potential, since they are aware of few such studies from fjords anywhere. ...And none from Glacier Bay.'

So far this year there have been no big surprises, but they have collected ~30 species, including a number of eelpouts and nine species of flatfishes. They have also collected a personal favorite, the Pacific spiny lumpsucker. The crew is excited by the potential, since there are aware of few such studies from fjords anywhere, and none from Glacier Bay.

Mid-water Trawls

The mid-water sampling employs a herring net that is towed through the water. While perhaps not as impressive species diversity-wise as the bottom trawls, the mid-water sets have produced about a dozen species that have typically been dominated by juvenile pollock (no surprises there).

They've also duplicated earlier interesting documentation of myctophids (lanternfish) at relatively shallow depths during the day (normally these fishes are quite deep during the day, migrating toward the surface to feed primarily at night to avoid visual predators).

They've captured several individuals of a deep-water smelt that's poorly described in existing keys - stayed tuned for more on this. Interestingly, their richest (abundance-wise) tows have come from Tarr Inlet. They plan to deploy an Isaacs-Kidd trawl for really deep-water (>250m) sets, and hope to find some interesting species down there.

For more information on this or other SEAN happenings, contact: Lewis Sharman (SEAN Network Lead/ GLBA), or check the SEAN Network Intranet site at: http://web/rgr/i&m/Networks.htm

Denali LTEM Turns Over a Few Rocks

In July, a number of I&M folks and DENA employees attended a workshop on the biological classification of rivers and streams in Denali and were able to learn about this LTEM (Long-Term Ecological Monitoring) project. The group studied classification rationale, stream ecology, aquatic macro-invertebrates and other species in the park, and field techniques. Thanks to Dr. Alexander Milner for the opportunity to take part in this interesting study.

Photo of Kirk Lohman and Susan Boudreau examining the stuff under the rocks in the Savage River.

Maggie MacCluskie, the new I&M Network Coordinator, lending the weight of her skills to the Surber Sampler with Dr. Milner.

The rest of the rock-turners and bug-scrapers.

Ecological Subsections Mapping Project

The EcoRegion/Ecological Subsection Mapping project is going strong. These subsections, or detailed sections, have already been used for inventory stratification of birds in WEAR, and are useful for a variety of landcover, monitoring, and ecological analysis functions. The goal is to complete the mapping work this fiscal year.

The descriptions and GIS products have been finished for many parks. Final reports will be in HTML with representative photos, maps, and detailed descriptions.

Mappers include Page Spencer of RBR, Dave Swanson in YUGA, Keith Boggs and Jerry Tande of AKNHP, Torre Jorgeson of ABR Inc., Matt Clark, and Michael Shephard of Tongass NF. For more information, please contact Page Spencer.

Data Management Tools Update

The Alaska Natural Heritage Program (AKNHP) has completed their task of populating NPSpecies and NRBib with information regarding vertebrate and vascular plants in Alaska's national parks. Some final tasks have to be completed by WASO I&M staff and are summarized in the synopsis below. The remaining final products from the Heritage Program are due September 30, 2001 and include detailed documentation of methods used in the reports.

NPSpecies - The NPS Species Database

This database was populated with information current as of July 2001. NPSpecies relies on the ITIS database for standard taxonomic nomenclature, and WASO I&M tells us that this has not yet been fully implemented nationally so for the time being the nomenclature may sometimes be other than what we expect.

The Master On-line NPSpecies application is now available for National Park Service use. A login name and password are required for access. These databases are available to NPS users via the web. You need to request a login from WASO, and the form with which to do so can be found at www.nature.nps.gov/im/apps/npspp.

NPBib - The NPS Natural Resources Bibliography

While the final product has been delivered by the AKNHP to WASO, it's not yet been put up on the web. The information available on the web is current as of October 2000. The water resources bibliography developed by Lisa Fox and Nancy Deschu has also been submitted to WASO for incorporation, as well.

"The Inventory and Monitoring Program creates an important foundation for effective, long-term management of natural resources throughout the Service."